

Figure 1 (A-F)

Construct Forms Comprising at Least one Single-Stranded Region

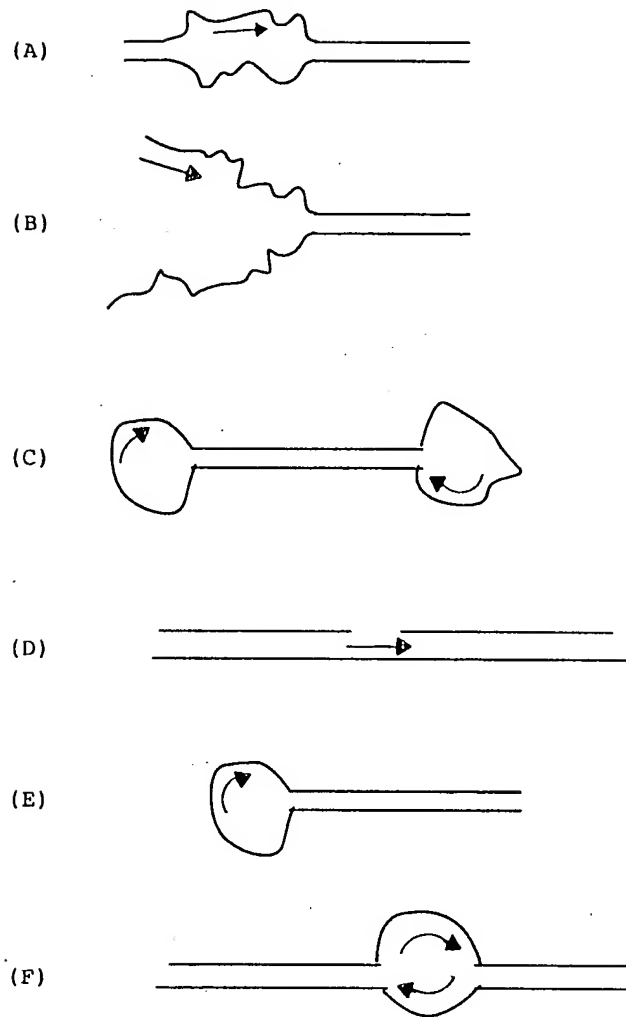


Figure 2 (A-F)

Functional Forms of the Construct

3/23

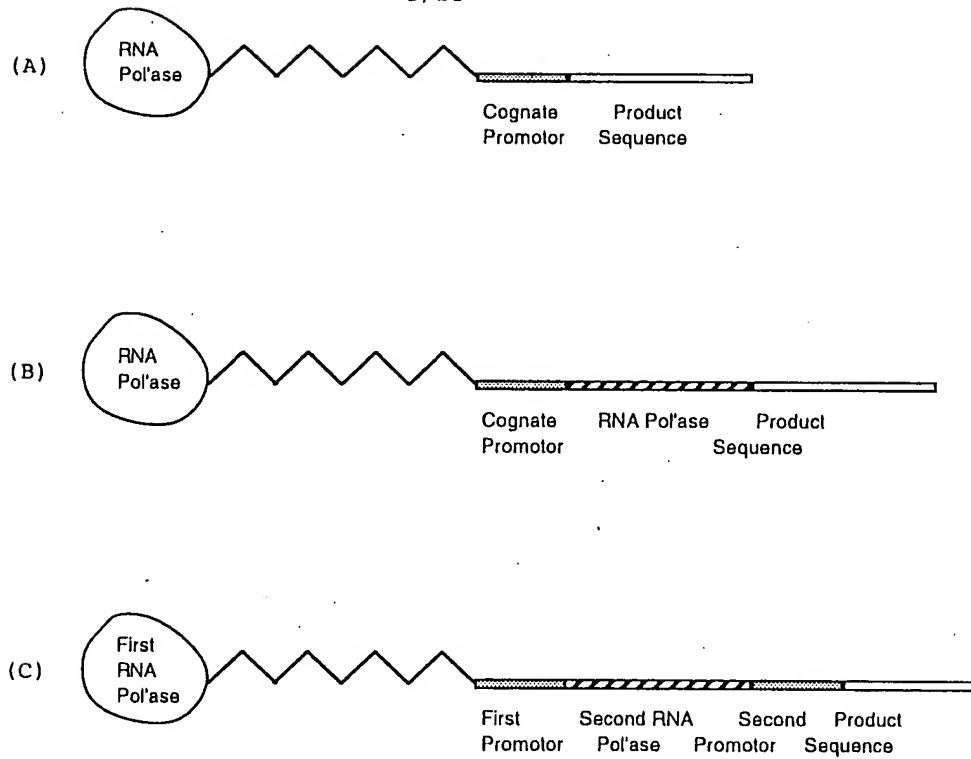


Figure 3 (A-C)

Three Constructs with an RNA Polymerase
Covalently Attached to a Transcribing Cassette

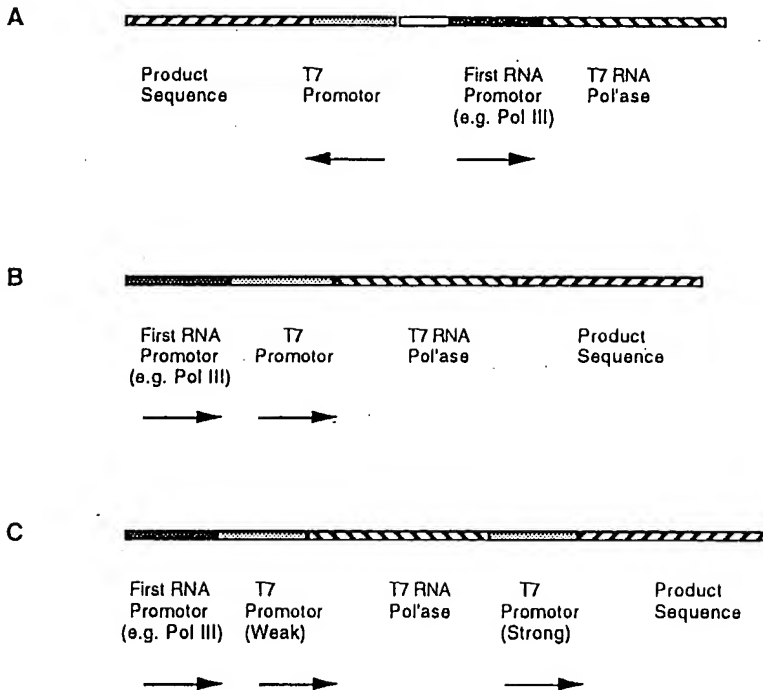


Figure 4 (A-C)

Three Constructs with Promoters for Endogenous RNA Polymerase

M13mp18. Seq Length: 7250

1.	AATGCTACTA	CTATTAGTAG	AATTGATGOC	ACCTTTTCAG	CTOGOGOOOC
51.	AAATGAAAAT	ATAGCTAAAC	AGGTATTGA	OCATTTGCGA	AATGTATCTA
101.	ATGGTCAAAC	TAAATCTACT	CGTTGCGAGA	ATTGGGAATC	AACTGTTACA
151.	TGGAATGAAA	CTTCAGACA	COGTACTTTA	GTTGCATATT	TAAAACATGT
201	TGAGCTACAG	CACCAGATTC	AGCAATTAAG	CTCTAAGOCA	TOOGCAAAAA
251	TGACCTCTTA	TCAAAAGGAG	CAATTAAAGG	TACTCTCTAA	TOCTGAOCTG
301.	TTGGAGTTTG	CTTCOGGTCT	GGTTGCTTT	GAAGCTOGAA	TTAAAACGCG
351.	ATATTTGAAG	TCTTTOGGGC	TTCCTCTTAA	TCTTTTGAT	GCAATOOGCT
401.	TTGCTTCTGA	CTATAATAGT	CAGGGTAAAG	ACCTGATTTT	TGATTTATGG
451.	TCATTCTOGT	TTTCTGAACT	GTTTAAAGCA	TTTGAGGGGG	ATTCAATGAA
501.	TATTTATGAC	GATTOGCGAG	TATTGGAOGC	TATCCAGTCT	AAACATTTTA
551.	CTATTACOOO	CTCTGGCAAA	ACTTCTTTTG	CAAAAGOOCT	TOGCTATTTT
601.	GGTTTTTATC	GTCGTCTGGT	AAAGGAGGGT	TATGATAGTG	TTGCTCTTAC
651.	TATGOCTOGT	AATTCCTTTT	GGGTTATGT	ATCTGCATTA	GTTGAATGTG
701.	GTATTOCTAA	ATCTCAACTG	ATGAATCTTT	CTAOCTGTAA	TAATGTTGTT
751.	COGTTAGTTC	GTTTTATTAA	CGTAGATTTT	TCTTCCCAAC	GTOCTGACTG
801.	GTATAATGAG	CCAGTTCCTA	AAATGCGATA	AGGTAATTCA	CAATGATTAA
851.	AGTTGAAATT	AAACCATCTC	AAGOOCAATT	TACTACTOGT	TCTGGTGTTC
901.	TOGTCAGGGC	AAGCTTATT	CACTGAATGA	GCAGCTTTGT	TACGTTGATT
951.	TGGGTAATGA	ATATCOGGTT	CTTGTOGAAG	ATTACTCTTG	ATGAAGGTCA
1001	GOCAGOOCTAT	GOGOOTGGTC	TGTACACOGT	TCATCTGTCC	TCTTTCAAAG
1051	TTGGTCAGTT	CGGTTCCCTT	ATGATTGAOC	GTCTGOGOOT	CGTTOGGGCT
1101	AAGTAACATG	GAGCAGGTGG	CGGATTTOGA	CACAAATTAT	CAGGOGATGA
1151	TACAAATCTC	CGTTGTAOCTT	TGTTTOGOGC	TTGGTATAAT	OGCTGGGGGT
1201	CAAAGATGAG	TGTTTTAGTG	TATTCTTTGG	OCTCTTTGGT	TTAGGTTGG

Figure 5

M13mp18 Nucleic Acid Sequence

1251	TGCTTGTGTA	GTGGCATTAC	GTATTTTACC	OGTTTAATGG	AAACTTCTCTC
1301	ATGAAAAAGT	CTTTAGTCCT	CAAAGCCTCT	GTAGCGGTG	CTAOCCTCGT
1351	TOGATGCTG	TCTTTOGCTG	CTGAGGGTGA	OGATCOOGCA	AAAGCGGCT
1401	TTAACTCOCT	GCAAGCCTCA	GCGAOCGAAT	ATATCGGTTA	TGCGTGGGCG
1451	ATGGTTGTTG	TCATTGTGCG	CGCAACTATC	GGTATCAAGC	TGTTTAAGAA
1501	ATTCACTCG	AAAGCAAGCT	GATAAACCGA	TACAATTAAA	GGCTCTTTT
1551	GGAGCCTTTT	TTTTTGAGAG	TTTCAACGT	GAAAAAATTA	TTATTGCAA
1601	TTCTTTAGT	TGTTCTTTT	TATTCTCACT	CGCTGAAAC	TGTTGAAAGT
1651	TGTTTAGCAA	AACCCATAC	AGAAAATTCA	TTTACTAACG	TCTGGAAAGA
1701	CGACAAACT	TTAGATCGTT	ACGCTAACTA	TGAGGGTTGT	CTGTGGAATG
1751	CTACAGGCGT	TGTAGTTTGT	ACTGGTGAAG	AACTCAGTG	TTACGGTACA
1801	TGGGTTCTA	TTGGGCTTGC	TATCOCTGAA	AATGAGGGTG	GTGGCTCTGA
1851	GGGTGGGCGT	TCTGAGGGTG	GCGGTTCTGA	GGGTGGGCGT	ACTAAACCTC
1901	CTGAGTAAGG	TGATACAACCT	ATTGCGGGCT	ATACTTATAT	CAACCTCTC
1951	GACGGCATT	ATGCGCTGG	TACTGAGCAA	AACCGCTA	ATCTAATCC
2001	TTCTCTTGAG	GAGTCTCAGC	CTCTTAATAC	TTTCATGTTT	CAGAATAATA
2051	GGTTOGAAA	TAGGCAGGGG	GCATTAACCTG	TTTATAAGGC	CACTGTTACT
2101	CAAGGCACTG	AACCGGTTAA	AACTTATTAC	CAGTACACTC	CTGTATCATC
2151	AAAAGCATG	TATGACGCTT	ACTGGAACGG	TAAATTCAGA	GACTGCGCTT
2201	CAAGGCACTG	AACCGGTTAA	AACTTATTAC	CAGTACACTC	CTGTATCATC
2151	AAAAGCATG	TGCTCAAC	TOCTGTCAAT	GCTGGGCGG	GCTCTGGTGG
2201	TCATTCTGG	CTTTAATCAA	GATOCATTOG	TTTGTGAATA	TCAAGGCCAA
2251	TGCTCTGAAC	TGCTCAAC	TOCTGTCAAT	GCTGGGCGG	GCTCTGGTGG
2301	TGGTTCTGGT	GGGGCTCTG	AGGGTGGTGG	CTCTGAGGGT	GGGGTCTCTG
2351	AGGGTGGGCG	CTCTGAGGGA	GGGGTTTGG	GTGGTGGCTC	TGGTTGGGT
2401	GATTTTGATT	ATGAAAAGAT	GGCAACGCT	AATAAGGGG	CTATGAACGA
2451	AAATGCGGAT	GAAAAAGGCG	TACAGTCTGA	CGCTAAAGGC	AACTTGATT

Figure 5

M13mp18 Nucleic Acid Sequence

2501	CTGTGCTAC	TGATTAOGGT	GCTGCTATOG	ATGGTTTCAT	TGGTGAOGTT
2551	TOCGGCOCTTG	CTAATGGTAA	TGGTGCTACT	GGTGATTTTG	CTGGCTCTAA
2601	TTOCCAAATG	GCTCAAGTOG	GTGAOGGTGA	TAATTCACCT	TTAATGAATA
2651	ATTTCOGTCA	ATATTTACCT	TOOCTOOCCTC	AATOGGTTGA	ATGTGGOOCT
2701	TTTGTCTTTA	GOGCTGGTAA	ACCATATGAA	TTTTCTATTG	ATTGTGACAA
2751	AATAAACTTA	TTOCGTGGTG	TCTTTGCGTT	TCTTTTATAT	GTTGOCACCT
2801	TTATGTATGT	ATTTTCTACG	TTTGCTAACA	TACTGOGTAA	TAAGGAGTCT
2851	TTATCATGOC	AGTTCCTTTG	GGTATTOOGT	TATTATTGCG	TTTOCTOOGT
2901	TTOCTTCTGG	TAACTTTGTT	CGGCTATCTG	CTTACTTTTC	TTAAAAAGGG
2951	CTTOGGTAAG	ATAGCTATTG	CTATTTTCATT	GTTTCTTGCT	CTTATTATTG
3001	GGCTTAACTC	AATTCTTGTTG	GGTTATCTCT	CTGATATTAG	CGCTCAATTA
3051	OCTCTGACT	TTGTTCAAGG	TGTTCACTTA	ATTCTCOOGT	CTAATGOGCT
3101	TOOCTGTTTT	TATGTTATTC	TCTCTGTAAA	GGCTGCTATT	TTCAATTTTTG
3151	ACGTAAACA	AAAAATCGTT	TCTTATTTGG	ATTGGGATAA	ATAATATGGC
3201	TGTTTTATTT	GTAAGTGGCA	AATTAGGCTC	TGGAAAGACG	CTOGTTAGOG
3251	TTGGTAAGAT	TCAGGATAAA	ATTGTAGCTG	GGTGCAAAAT	AGCAACTAAT
3301	CTTGATTTAA	GGCTTCAAAA	OCTCOOGCAA	GTOGGGAGGT	TOGCTAAAAC
3351	GCTOOGGTT	CTTAGAATAC	CGGATAAGOC	TTCTATATCT	GATTTGCTTG
3401	CTATTGGGOG	CGGTAATGAT	TOCTACGAATG	AAAATAAAAA	CGGCTTGCTT
3451	GTTCTOGATG	AGTGOGGTAC	TTGGTTTAAT	AOCOGTTCCT	GGAATGATAA
3501	GGAAAGACAG	CCGATTATTG	ATTGGTTTCT	ACTGCTOGT	AAATTAGGAT
3551	GGGATATTAT	TTTTCTTGTT	CAGGACTTAT	CTATTGTTGA	TAAACAGGOG
3601	CGTTCTGCAT	TAGCTGAACA	TGTTGTTTAT	TGTOGTGCTC	TGGACAGAAT
3651	TACTTTACCT	TTTGTOGGTA	CTTTATATTC	TCTTATTACT	GGCTOGAAAA
3701	TGOCTCTGOC	TAAATTACAT	GTTGGOGTTG	TTAAATATGG	CGATTCTCAA
3751	TTAAGCOCTA	CTGTTGAGOG	TTGGCTTTAT	ACTGGTAAGA	ATTTGTATAA
3801	CGCATATGAT	ACTAAACAGG	CTTTTCTAG	TAATTATGAT	TOCGGTGTTT

Figure 5

M13mp18 Nucleic Acid Sequence

3851	ATTCTTATTT	AACGCTTAT	TTATCACACG	GTCGGTATTT	CAAACCATTA
3901	AATTTAGGTC	AGAAGATGAA	ATTAACATAA	ATAATATTGA	AAAAGTTTTT
3951	TCGGTTCCTT	TGTCTTGCGA	TTGGATTGTC	ATCAGCATT	ACATATAGTT
4001	ATATAACCCA	ACCTAAGGCG	GAGGTTAAAA	AGGTAGTCTC	TCAGACCTAT
4051	GATTTTGATA	AATTCACAT	TGACTCTTCT	CAGGCTCTTA	ATCTAAGCTA
4101	TCGCTATGTT	TTCAAGGATT	CTAAGGGAAA	ATTAATTAAT	AGGACGATT
4151	TACAGAAGCA	AGGTTATTCA	CTCACATATA	TTGATTTATG	TACTGTTTCC
4201	ATTAATAAAG	GTAATTCAAA	TGAAATTGTT	AAATGTAATT	AATTTTGTTT
4251	TCTTGATGTT	TGTTTCATCA	TCTTCTTTTG	CTCAGGTAAT	TGAAATGAAT
4301	AATTOGCTC	TGCGGATTT	TGTAACCTGG	TATTCAAAGC	AATCAGGCGA
4351	AATCCGTTATT	GTTTCTCCCG	ATGTAAAAGG	TACTGTTACT	GTATATTCAT
4401	CTGAAGTTAA	ACCTGAAAAT	CTACGCAATT	TCTTTATTTC	TGTTTTACGT
4451	GCTAATAATT	TTGATAATGGT	TGGTTCAATT	OCTTOCATAA	TTCAGAAGTA
4501	TAATCCAAAC	AATCAGGATT	ATATTGATGA	ATTGOCATCA	TCTGATAATC
4551	AGGAATATGA	TGATAATTC	GCTCCTCTCG	GTGGTTTCTT	TGTTCCGCAA
4601	AATGATAATG	TTACTCAAAC	TTTTAAAATT	AATAACGTT	GGGCAAGGA
4651	TTTAATACGA	GTTGTGGAAT	TGTTTGTAAG	GTCTAATACT	TCTAAATCCT
4701	CAAATGTATT	ATCTATTGAC	GGCTCTAATC	TATTAGTTGT	TAGTGCTCCT
4751	AAAGATATTT	TAGATAACCT	TCCTCAATTC	CTTCTACTG	TTGATTTGCC
4801	AATGAACAG	ATATTGATTG	AGGGTTTGAT	ATTTGAGGTT	CAGCAAGGTG
4851	ATGCTTTAGA	TTTTTCATTT	GCTGCTGGCT	CTCAGGTTGG	CACTGTTGCA
4901	GGGGTGTGTA	ATACTGAACG	OCTCAOCTCT	GTTTTATCTT	CTGCTGGTGG
4951	TTGTTCCGGT	ATTTTAAATG	GCGATGTTTT	AGGGCTATCA	GTTCCGTCAT
5001	TAAAGACTAA	TAGCATTCA	AAAATATTGT	CTGTGCAACG	TATTCTTACG
5051	CTTTCAGGTC	AGAAGGGTTC	TATCTCTGTT	GGCCAGAATG	TCCCTTTTAT
5101	TAAAGACTAA	TAGCATTCA	AAAATATTGT	CTGTGCAACG	TATTCTTACG
5151	CGATTGAGCG	TCAAAATGTA	GGTATTTOCA	TGAGCGTTTT	TCCTGTTGCA

Figure 5

M13mp18 Nucleic Acid Sequence


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5201 ATGGCTGGGG . GTAATATTGT TCTGGATATT AOCAGCAAGG CCGATAGTTT
5251 GAGTTCTCT ACTCAGGCAA GTGATGTTAT TACTAATCAA AGAAGTATTG
5301 CTACAAOOGT TAATTTGGGT GATGGACAGA CTCTTTTACT OGGTGGGCTC
5351 ACTGATTATA AAAACACTTC TCAAGATTCT GGGGTACOGT TCCTGTCTAA
5401 AATOCCTTTA ATDGGGCTCC TGTTTAGCTC CCGCTCTGAT TCCAACGAGG
5451 AAAGCAOGTT ATAOGTGCTC GTCAAAGCAA OCATAGTAOG CGOCTGTAG
5501 OGGGCGATTA AGCGGGGGG GTGTGGTGGT TAOGGCGAGC GTGACOGCTA
5551 CACTTGOCAG CGOCTAGCG CCGGCTOCTT TCGCTTTCTT COCTTCCTTT
5601 CTGOCACOGT TGGGCGGCTT TCCCGTCAA GCTCTAAATC GGGGGCTOOC
5651 TTTAGGGTTC OGATTTAGTG CTTTACGGCA OCTGACOOOC AAAAACTTG
5701 ATTTGGGTGA TGGTTCAOGT AGTGGGOCAT CGOCTGATA GACGGTTTTT
5751 CGOCTTTGA CGTTGGAGTC CACGTTCTTT AATAGTGGAC TCTTGTTCCA
5801 AACTGGAACA AACTCAAOC CTATCTGGG CTATTCTTTT GATTTATAAG
5851 GGATTTGOC GATTOGGAA CCAOCATCAA ACAGGATTTT CGOCTGCTGG
5901 GGCAAAOCAG CGTGGACOGC TTGCTGCAAC TCTCTAGGG CCAGGGGGTG
5951 AAGGGCAATC AGCTGTTGOC CGTCTOGCTG GTGAAAAGAA AAAOCAOCT
6001 GGGGCOCAAT ACGCAAOOG OCTCTOOOG CGGTTGGOC GATTCATTAA
6051 TGCAGCTGGC ACGACAGGTT TCOGACTGG AAAGGGGGCA GTGAGGGCAA
6101 CGCAATTAAT GTGAGTTAGC TCACTCATTA GGCADOOAG GCTTTACACT
6151 TTATGCTTCC GGCTGATATG TTGTGTGGAA TTGTGAGGG ATAACAATTT
6201 CACACAGGAA ACAGCTATGA CCATGATTAC GAATTOGAGC TOGGTACOOG
6251 GCGATCCTCT AGAGTOGACC TGCAGGCATG CAAGCTTGGC ACTGGGOGTC
6301 GTTTTACAAC GTGTGACTG GGAAAAOCT GGGGTTAOC AACTTAATOG
6351 OCTTGACGCA CAATCOOCTT TOGOCAGCTG GGGTAATAGC GAAGAGGBOC
6401 GCAOOGATOG COCTTOOCOA CAGTTGCGCA GCGTGAATGG CGAATGGGCG
6451 TTTGCTGGT TTOGGGACC AGAAGGGTG CCGGAAAGCT GGCTGGAGTG
6501 CGATCTTCT GAGGCOGATA CGGTGTOGT COOCTCAAAC TGGCAGATGC

```

Figure 5

M13mp18 Nucleic Acid Sequence

10/23

6551	AOGGTTAOGA	TGOGGOCATC	TACACCAAOG	TAAOCTATOC	CATTACGGTC
6601	AATOGGOGGT	TTGTTCCAC	GGAGAATCOG	ACGGGTTGTT	ACTOGCTCAC
6651	ATTTAATGTT	GATGAAAGCT	GGCTACAGGA	AGGOCAGAOG	CGAATTATTT
6701	TTGATGGOGT	TCCTATTGGT	TAAAAAATGA	GCTGATTAA	CAAAAATTTA
6751	AOGGAATTT	TAACAAAATA	TTAACGTTTA	CAATTTAAAT	ATTTGCTTAT
6801	ACAATCTTOC	TGTTTTTGGG	GCTTTTCTGA	TTATCAAOOG	GGGTACATAT
6851	GATTGACATG	CTAGTTTTAC	GATTACOGTT	CATCGATTCT	CTTGTTTGCT
6901	OCAGACTCTC	AGGCAATGAC	CTGATAGCOCT	TTGTAGATCT	CTCAAAAATA
6951	GCTACCOCTCT	COGGCATGAA	TTTATCAGCT	AGAACGGTTG	AATATCATAT
7001	TGATGGTGAT	TTGACTGTCT	COGGCCTTTC	TCACCOCTTTT	GAATCTTTAC
7051	CTACACATTA	CTCAGGCATT	GCATTTAAAA	TATATGAGGG	TTCTAAAAAT
7101	TTTTATCCTT	GCGTTGAAAT	AAAGGCTTCT	COOGCAAAAG	TATTACAGGG
7151	TCATAATGTT	TTTGGTACAA	COGATTTAGC	TTTATGCTCT	GAGGCTTTAT

Figure 5

M13mp18 Nucleic Acid Sequence

COMPLEMENTARY TO M₁₃

POSITION	5' . . . 3'	POSITION	
645	AGCAACACTATCATA	631	M ₁₃ /1
615	ACGAOGATAAAAAOC	601	M ₁₃ /2
585	TTTTGCAAAAGAAGT	571	M ₁₃ /3
555	AATAGTAAAATGTTT	541	M ₁₃ /4
525	CAATACTGOGGAATG	511	M ₁₃ /5
495	TGAATCCCCOCTCAA	481	M ₁₃ /6
465	AGAAAACGAGAATGA	451	M ₁₃ /7
435	CAGGTCTTTACCOCTG	421	M ₁₃ /8
405	AGGAAAGCGGATTGC	391	M ₁₃ /9
375	AGGAAGCCCGAAAGA	361	M ₁₃ /10

COMPLEMENTARY TO SS PHAGE DNA

POSITION	5' . . . 3'	POSITION	
351	ATATTTGAAGTCTTT	366	M ₁₃ /11
371	TCTTTTGTATGCAAT	386	M ₁₃ /12
391	CTATAATACTCAGGG	406	M ₁₃ /13
411	TGATTTATGGTCATT	426	M ₁₃ /14
431	GTTTAAAGCATTTGA	446	M ₁₃ /15
451	TATTTATGACGATTC	466	M ₁₃ /16
471	TATCCAGTCTAAACA	486	M ₁₃ /17
491	CTCTGGCAAACTTC	506	M ₁₃ /18
511	TCGCTATTTTGGTTT	526	M ₁₃ /19
531	AAACGAGGGTTATGA	546	M ₁₃ /20

Figure 6

Primers for Nucleic Acid Production
Derived from M13mp18 Sequence

12/23

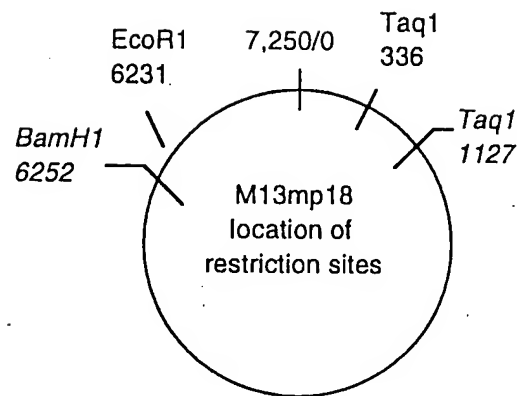
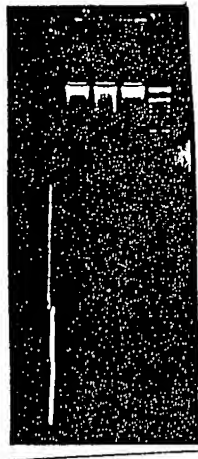


Figure 7

Appropriate M13mp18 Restriction Sites

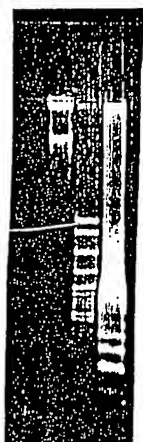
13/23



Lane 1: from calf thymus + Taq digested mp18 amplification reaction
Lane 2: from Taq digested mp18 amplification reaction
Lane 3: from calf thymus amplification reaction
Lane 4: øX174 Hinf1 size marker

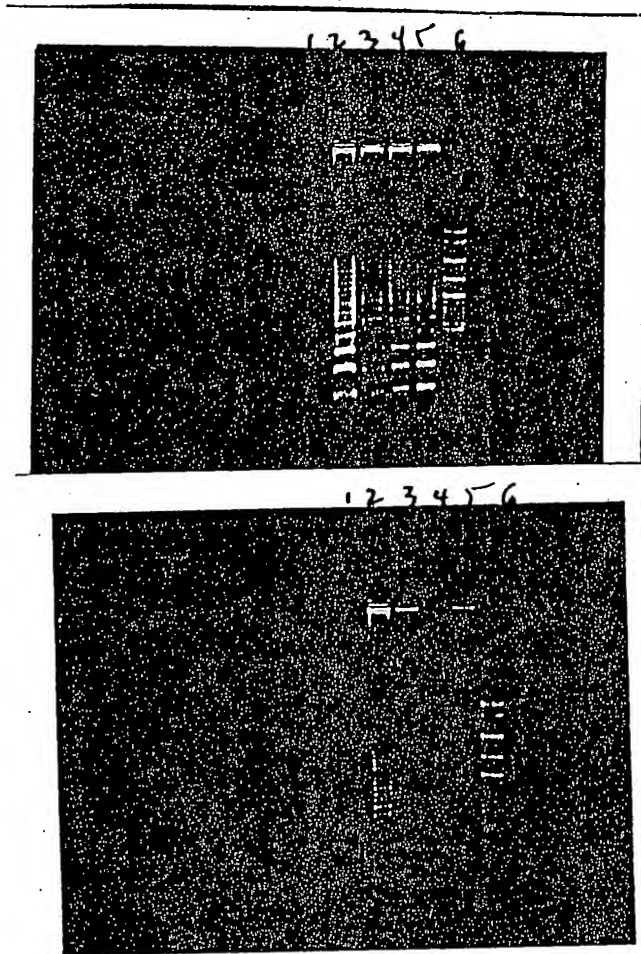
Figure 8

14/23



Lane 1: no template
Lane 2: mp18 template, phosphate buffer
Lane 3: MspI/pBR322 size marker
Lane 4: mp18 template, MOPS buffer

Figure 9



Top= (+) Template

Bottom= (-) Template

Lane 1: phosphate buffer

Lane 2: MES

Lane 3: MOPS

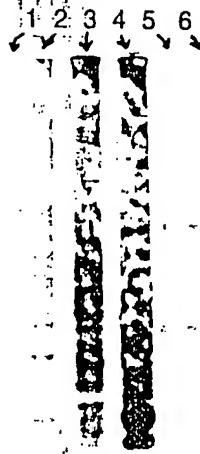
Lane 4: DMAB

Lane 5: DMG

Lane 6: pBR322/Mspl size marker

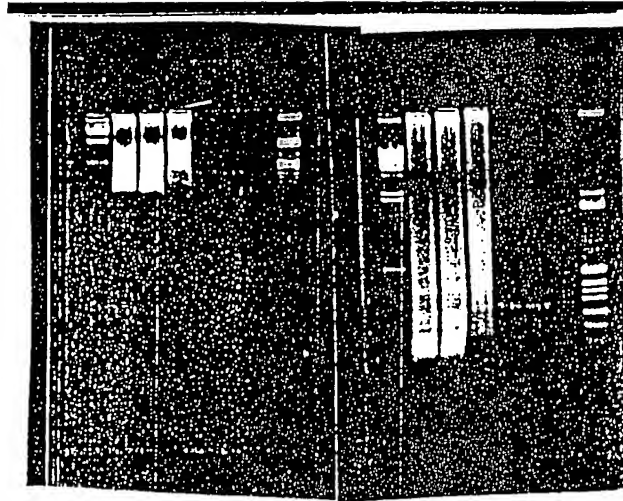
Figure 10

16/23



Lane 1: DMAB buffer, no template
Lane 2: DMAB buffer, mp18 template
Lane 3: DMG buffer, no template
Lane 4: DMG buffer, mp18 template
Lane 5: No reaction
Lane 6: 200 ng Taq I digested mp18
size marker/positive control

Figure 11



First Time Interval Second Time Interval

Agarose Gel Analysis

- Lane 1: lambda Hind III marker
- Lane 2: Amp/Untreated
- Lane 3: Amp/Kinased
- Lane 4: Amp/Kinased/Ligated
- Lane 5: PCR/Untreated
- Lane 6: PCR/Kinased
- Lane 7: PCR/Kinased/Ligated
- Lane 8: ϕ X174/Hinf1 marker

Figure 12

18/23

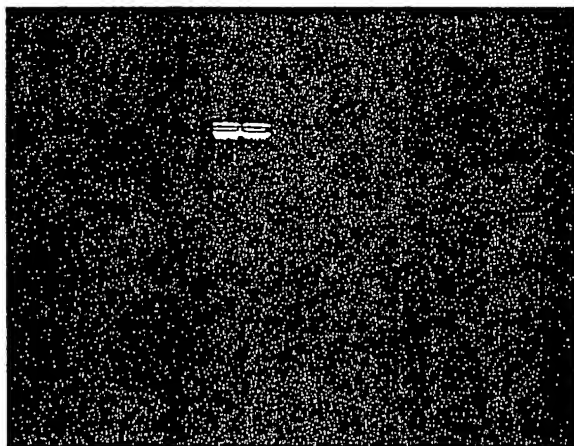
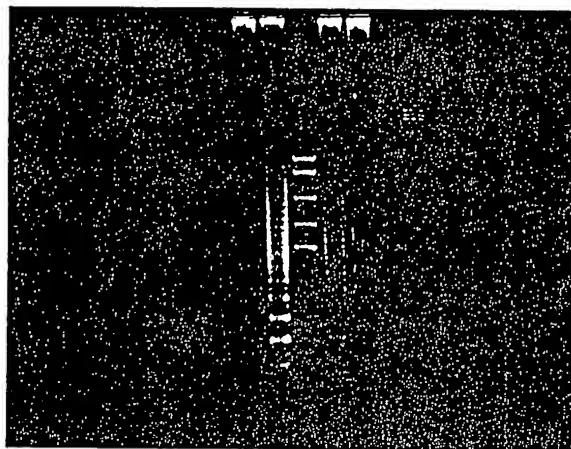


Figure 13



19/23

1 2 3 4 5 6



Lane 1: Primers alone

Lane 2: Primers + taq digested M13 DNA

Lane 3: Molecular weight markers

Lane 4: Primers + RNA

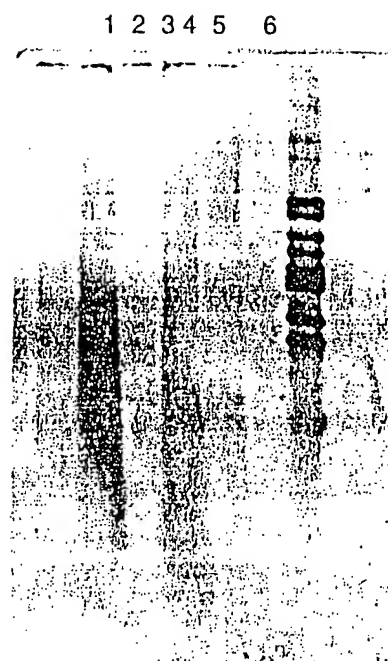
Lane 5: Primers alone

Lane 6: M13 digested DNA

Buffer was dimethyl amino glycine, pH 8.6

Figure 14

20/23



Lane 1: Primers alone
Lane 2: Primers + taq digested M13 DNA
Lane 3: Molecular weight markers
Lane 4: Primers + RNA
Lane 5: Primers alone
Lane 6: M13 digested DNA
Buffer was dimethyl amino glycine, pH 8.6

Figure 15

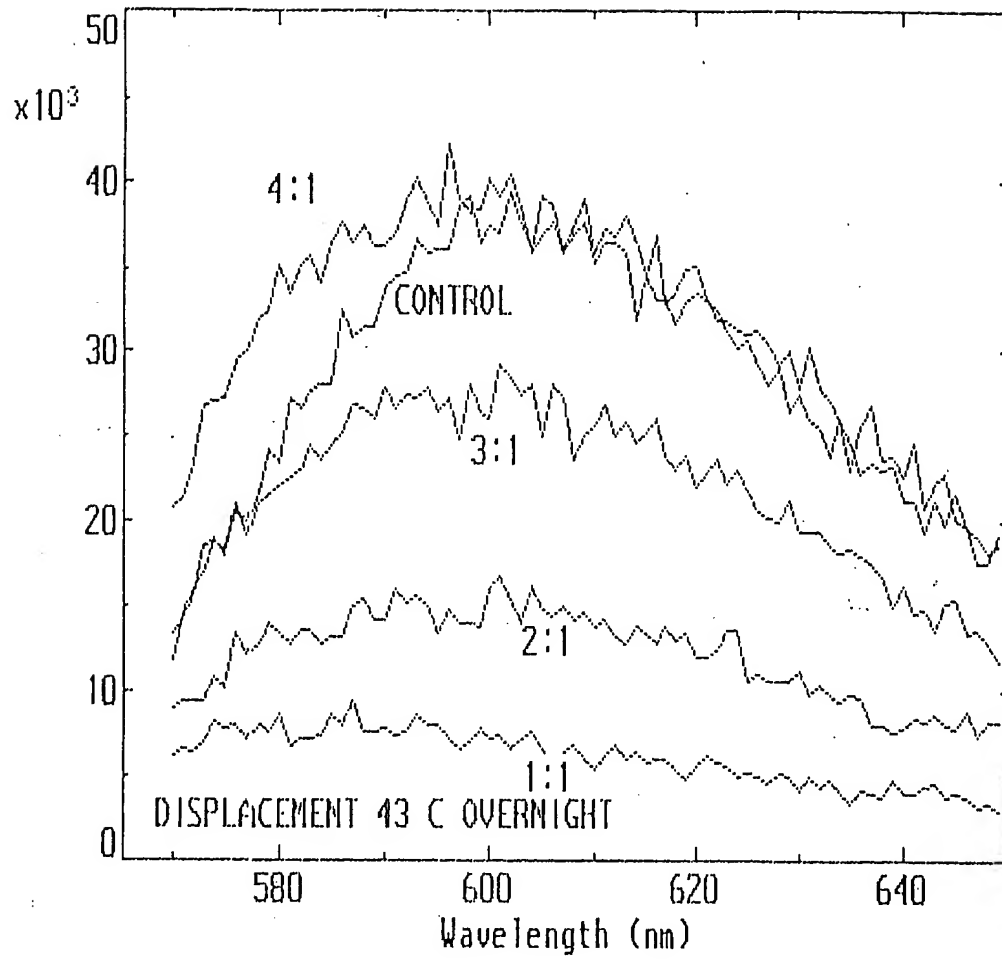


Figure 16

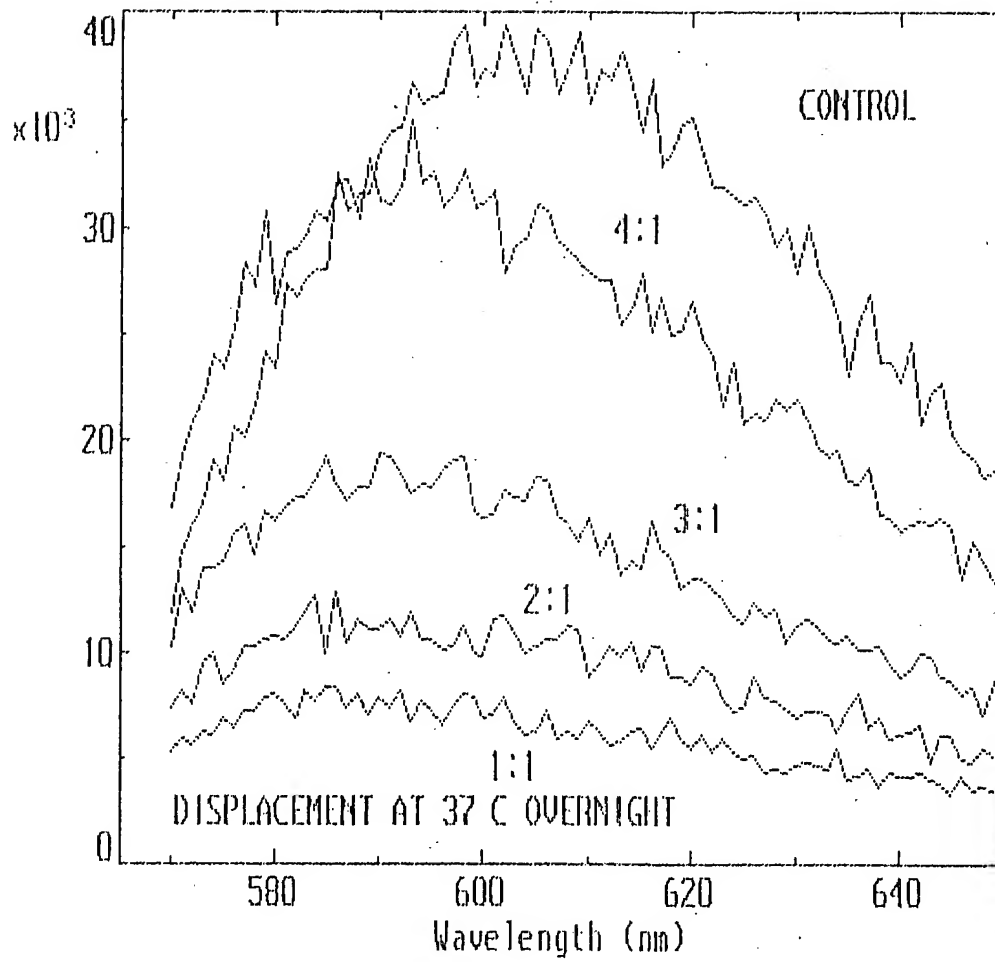


Figure 17

23/23

pIBI 31-BH5-2

fmet AUG of Lac z (T7 Promotor region....
LAC PROMOTOR..ATG ACC ATG ATT ACG CCA GAT ATC AAA TTA ATA CGA CTC ACT ATA
oligo 50-mer 3'- tac t*aa t*gc ggt* ct*a t*ag t*Vt aat* tat* gct* gag t*ga t*at* c-5'
10 base insert
T7 RNA Start (« T3 Promotor Region)
IGGG CTC ICCT TTA GTG ACG GTT AAT
...»} «- T3 Start Signal

pIBI 31 BSII/HCV

fmet AUG of Lac z (T3 Promotor region --) T3 RNA Start
LAC PROMOTOR ..ATG ACC ATG ATT ACG CCA AGC TCG AAA TTA ACC CTC ACT AAA /GGG
oligo 50-mer 3'- tac t*aa t*ac t*aa t*gc ggt* t*V--10 base insert-----
MULTIPLE CLONING SITE + 390 BASE INSERT CTA /TAG TGA GTC CGT ATT AAT....
«- T7 Start Signal
5'-ct*a t*ag t*ga gt*c gl*a tt*a at*.....

Figure 18